REMARKS

This response is intended as a full and complete response to the non-final Office Action mailed May 3, 2004. In the Action, the Examiner notes that claims 1-17 are pending, of which claims 1-14, 16, and 17 stand rejected, and claim 15 is objected to. By this response, all the claims continue unamended.

In view of the following discussion, the applicants submit that none of the claims now pending in the application are indefinite, anticipated or obvious under the respective provisions of 35 U.S.C. §§112, 102 and 103. Thus, the Applicants believe that all of these claims are now in allowable form.

ALLOWABLE SUBJECT MATTER

The Examiner has objected to claim 15 as being dependent upon a rejected base claim. The Examiner concludes that this claim would be allowable subject matter if rewritten in independent form including all the limitations of the base claim and any intervening claims.

The Applicants thank the Examiner for indicating the allowable subject matter with respect to claim 15. However, in view of discussion set forth herein, the Applicants believe base claim 10 (and all intervening claims) is in allowable form and, as such, dependent claims 11-17, as they stand, are therefore in allowable condition. Therefore, the Applicants respectfully request that the foregoing objection to claim 15 be withdrawn.

REJECTIONS

1. 35 U.S.C. §112

a. Claim 1

The Examiner has rejected claim 1 for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Examiner states that claim 1 recites the limitation "said navigational assets" in line 8 and finds that there is insufficient antecedent basis for this limitation in the claim. Applicants respectfully traverse the rejection.

Applicants' claim 1 recites:

> "In an information distribution system providing content data and asset data comprising navigational information to at least one subscriber, apparatus comprising:
>
> a NULL packet inserter, for inserting NULL transport packets within a transport stream including content packets; and
>
> a transport processor, for replacing at least some of said NULL packets with asset packets, said asset packets comprising said navigational information for facilitating control and presentation of navigational menus for selecting content at a set-top terminal, said asset packets being associated with said content packets to produce a composite transport stream including said navigational information."

The limitation "said navigational assets" is not recited in claim 1. As such, Applicants submit that independent claim 1 is not indefinite and fully satisfies the requirements of 35 U.S.C. §112 and is patentable thereunder. Therefore, Applicants respectfully request that the rejection be withdrawn.

2. 35 U.S.C. §103

Claims 1-6, 8-13, 16 and 17

The Examiner has rejected claims 1-6, 8-13, 16 and 17 under 35 U.S.C. §103 as being obvious and unpatentable over Mendelson et al. (U.S. Patent 5,745,696, hereinafter "Mendelson") in view of Brooks et al. (U.S. Patent 5,826,166, hereinafter "Brooks"). Applicants respectfully traverse the rejection.

The test under 35 U.S.C. §103 is not whether an improvement or a use set forth in a patent would have been obvious or non-obvious; rather, the test is whether the claimed invention, considered as a whole, would have been obvious. Jones v. Hardy, 110 U.S.P.Q. 1021, 1024 (Fed. Cir. 1984) (emphasis added). Moreover, the invention as a whole is not restricted to the specific subject matter claimed, but also embraces its properties and the problem it solves. In re Wright, 6 U.S.P.Q. 2d 1959, 1961 (Fed. Cir. 1988) (emphasis added). The combination of Mendelson and Brooks fails to teach, show or suggest Applicants' invention as a whole.

Applicants' independent claim 1 (and similarly, independent claim 10) recites:

> "In an information distribution system providing content data and asset data comprising navigational information to at least one subscriber, apparatus comprising:

> a NULL packet inserter, for inserting NULL transport packets within a transport stream including content packets; and
>
> a transport processor, for replacing at least some of said NULL packets with asset packets, said asset packets comprising said navigational information for facilitating control and presentation of navigational menus for selecting content at a set-top terminal, said asset packets being associated with said content packets to produce a composite transport stream including said navigational information." (emphasis added).

Mendelson discloses "[i]f [ ] any of the cell buffers 731 are found to be empty while reading, the [cell time division multiplexer] CTDM 730 can signal the corresponding cell queue 720 to provide "fill" cells. The fill cells can be provided by the fill generator 723. An idle cell can either be a "null" cell including null bytes, or the idle can be and "available bit rate" (ABR) cell. An ABR cell can be used to transport data other than the transport stream 200, for example, untimed data." (see Mendelson, col. 8, lines 23-30 and FIG. 7 (emphasis added)).

Thus, the Mendelson reference does not teach first "inserting NULL transport packets within a transport stream including content packets," and then "replacing at least some of said NULL packets with asset packets." Rather, Mendelson merely discloses preventing jitter by inserting either a NULL cell or a data cell in an instance where a buffer is empty. In other words, if an empty buffer is identified, the either a NULL cell or a data cell may be "filled" in such buffer.

Referring to the Applicants' specification, "[t]he service provider equipment 102 processes content data and asset data to provide, respectively, a content data transport stream CONTENT and an asset data transport stream ASSETS. The asset data transport stream ASSETS includes a plurality of transport packets carrying asset data. The content data transport stream CONTENT includes a plurality of NULL transport packets interspersed with content transport packets such that the NULL packets "reserve" a portion of the asset data stream sufficient to accommodate the asset data packets within the asset data stream ASSETS. The service provider equipment 102, in response to a subscriber request for a content stream, provides a version of the requested content stream in which some or all of the NULL packets have been replaced by asset data packets. In this manner, the service provider equipment 102 is able to

adapt the asset data provided to a subscriber without reprocessing the content data." (see Applicants specification, page 4, line 25 to page 5, line 4).

Nothing in the Mendelson reference teaches or suggests that after the NULL packets are inserted into the content stream, some or all of the NULL packets are replaced with asset packets. The insertion of the NULL packets in the Applicants' invention is performed purposefully, prior to some or all of the NULL packets being replaced with asset packets. By contrast, Mendelson merely discloses that a cell buffer may be empty. There is no suggestion in Mendelson that a buffer be left empty such that either a NULL packet or data packet can be subsequently inserted in its place. Therefore, the Applicants' respectfully submit that the Mendelson reference does not teach or suggest the features of the Applicants' invention, as the Examiner contends.

Furthermore, Brooks fails to bridge the substantial gap as between Mendelson and Applicants' invention. Specifically, Brooks discloses that navigation software may be downloaded through the network to a digital entertainment terminal (DET) (i.e., subscriber equipment). "The Navigation software, when loaded by the DET, may also be implemented as a menu program operating as an electronic TV Guide that is recalled each time the user presses a predetermined button, for example "GUIDE", on the remote control." (see Brooks, col. 13, lines 15-53).

However, nowhere in Brooks is there any teaching or suggestion of first "inserting NULL transport packets within a transport stream including content packets," and then "replacing at least some of said NULL packets with asset packets." That is, there is no suggestion in Brooks that NULL packets be inserted into the transport stream including content packets, and then replacing some or all of the inserted NULL packets with asset packets (e.g., navigation software).

Even if the two references could somehow be operably combined, the combination would merely provide identifying an empty buffer and inserting either a NULL cell or a data cell, and sending navigational data with content to the subscriber equipment. Therefore, since neither reference, either singularly or in combination, teaches or suggests "inserting NULL transport packets within a transport stream including content packets," and "replacing at least some of said NULL packets with

asset packets" the two references fail to teach or suggest the Applicants' invention as a whole.

Moreover, the combination of Mendelson and Brooks fails to embrace the problem that Applicants' invention solves. In particular, Applicants' invention solves the problems associated with embedding assets, such as Navigation assets, within the content. As discussed in the Applicants' specification, the prior art places a severe limitation on changes to the assets. For example, if a bitmap asset must be changed to provide new graphic data, the content files for all navigation screens using that bitmap need to be re-multiplexed, redistributed, and re-loaded onto all servers. Additionally, the multiplexing of the Navigation assets and content may result in a duplication of the Navigation asset data within each of a plurality of content streams including the data. (see Applicants' specification, page 2, lines 12-24).

By contrast, the combination of Mendelson and Brooks addresses the problem of minimizing jitter and wander during program reconstruction. Therefore, the Applicants' invention embraces a completely different problem than the problems addressed by the cited references. Therefore, the combination of Mendelson and Brooks fails to teach or suggest the Applicant's invention as a whole.

As such, Applicants submit that independent claims 1 and 10 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Furthermore, claims 2-6, 8-9, 11-13 and 16-17 depend directly or indirectly from independent claims 1 and 10 and recite additional limitations thereof. As such, and for at least the same reasons as discussed above, Applicants submit that such dependent claims are also not obvious and fully satisfy the requirements of 35 U.S.C.§103 and are patentable thereunder. Therefore, Applicants respectfully request that the rejections be withdrawn.

Claims 7 and 14

The Examiner has rejected claims 7 and 14 under 35 U.S.C. 103(a) as being unpatentable over Mendelson in view of Brooks further in view of Hiroshima et al. (U.S. Patent 5,801,781, hereinafter "Hiroshima"). Applicants respectfully traverse the rejection.

Claims 7 and 14 respectively depend, either directly or indirectly, from independent claims 1 and 10, and recite additional features thereof.

As discussed above, neither Mendelson nor Brooks, either singly or in combination, teaches or suggests Applicants' invention as a whole. That is, the combination of Mendelson and Brooks merely discloses identifying an empty buffer and inserting either a NULL cell or a data cell, and sending navigational data with content to the subscriber equipment. (see Mendelson, col. 8, lines 23-30 and FIG. 7, and Brooks, col. 13, lines 15-53).

Furthermore, Hiroshima fails to bridge the substantial gap as between Mendelson and Brooks, and the Applicants' invention. Hiroshima discloses that a program association table (PAT) and program map table (PMT) may be stored in a payload of a transport stream (TS) packet. (see Hiroshima, col. 3, lines 9-50). Thus, even if the three references could somehow be operably combined, the combination would disclose identifying an empty buffer and inserting either a NULL cell or a data cell, inserting a PAT and PMT in a payload of a packet, and sending navigational data with content to the subscriber equipment. The combined references are completely different from the applicants' invention and fail to suggest the features of "inserting NULL transport packets within a transport stream including content packets," and "replacing at least some of said NULL packets with asset packets." Therefore, the combined references fail to teach or suggest the Applicants' invention as a whole.

As such, Applicants submit that claims 7 and 14 are not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, Applicants respectfully request that the rejections be withdrawn.

CONCLUSION

Thus, the applicants submit that claims 1-17 are in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Steven M. Hertzberg, Esq. or Eamon J. Wall, Esq. at (732) 530-9404 so appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

7/26/04

E. J. Wall

Eamon J. Wall, Attorney
Reg. No. 39,414
(732) 530-9404

Moser, Patterson & Sheridan, LLP
Attorneys at Law
595 Shrewsbury Avenue, Suite 100
Shrewsbury, New Jersey 07702